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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

09/779,719

02/08/2001

Edward G. Tiedemann JR.

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EXAMINER

NGUYEN, TOAN D

ART UNIT

PAPER NUMBER

2616

NOTIFICATION DATE

DELIVERY MODE

04/10/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com  
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|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/779,719             | TIEDEMANN ET AL.    |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | TOAN D. NGUYEN         | 2616                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 January 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/15/08 has been entered.

### ***Response to Arguments***

2. Applicant's arguments filed 01/15/08 have been fully considered but they are not persuasive.

The applicant argues on page 9, first paragraph, that Hulbert does not disclose a sum of energy, applicant's invention as presently claimed in amended independent claims 1 and 14, recite in part, "repeating [retransmitting] until a sum of the first and further symbol energy amounts... is great enough to ..." The examiner disagrees. Hulbert clearly teaches at col. 3, lines 14-19 (see figure 2): "In the transmitting station 20 (figure 2, reference 20, base station means), the bit which was transmitted is compared against the bit reflected back from the receiving station (figure 2, reference 22, mobile station means) in order to identify those bits which were received in error at the receiving station. Whenever an error is detected, the transmitted power is increased by an amount  $U_dB$  (a sum of the first and further symbols energy amounts means). Hulbert teaches further at col. 4, lines 6-10 (see figure 2): "If the bit are different, indicating an

error, then the output will be high (1), and the accumulator input will be fed with +Up Step.” The output of the accumulator (a sum of the first and further symbols energy amounts means) controls the power of the transmitter 38 in a logarithmic fashion.”

On page 9, third paragraph, the applicant argues that Hulbert does not disclose applicant's invention as presently claimed in amended independent claims 1 and 14, recite in part, “the traffic information is transmitted...with a further symbol energy amount that is also insufficient by itself for correct demodulation of the traffic information.” The examiner disagrees. Hulbert clearly teaches at col. 3, lines 17-19 (see figure 2): “Whenever an error is detected, the transmitted power is increased by an amount  $U_{dB}$  (a further symbol energy amount that is also insufficient by itself for correct demodulation of the traffic information means). Hulbert teaches further at col. 4, lines 6-10 (see figure 2): “If the bit are different, indicating an error, then the output will be high (1), and the accumulator input will be fed with +Up Step.” The output of the accumulator (a further symbol energy amount that is also insufficient by itself for correct demodulation of the traffic information means) controls the power of the transmitter 38 in a logarithmic fashion.”

On page 9, fifth paragraph, the applicant argues that Hulbert does not disclose applicant's invention as presently claimed in amended independent claims 1 and 14, recite in part, “transmitting traffic information from the base station...retransmitting from the base station the traffic information... and repeating [retransmitting from the base station]...” The examiner disagrees. Hulbert teaches at col. 3, line 56 to col. 4, line 10 (see figure 2): “...The transmitting station 20 (figure 2, reference 20, base station means)

modulates the data from data source 24 via modulation circuit 28 onto the transmitter at the current power level via combiner/splitter and antenna 20a (transmitting traffic information from the base station means)...If the bit are different, indicating an error, then the output will be high (1), and the accumulator input will be fed with +Up Step.” The output of the accumulator (retransmitting, and repeating [retransmitting] from the base station means) controls the power of the transmitter 38 in a logarithmic fashion.”

The applicant argues with respect to claim 3 on page 10, sixth paragraph, that the nonobviousness of amended independent claim 1 precludes a rejection of claim 3 which depends therefrom because a dependent claim is obvious only if the independent claim which it depends is obvious. The examiner disagrees. Claim 1 is rejected (see the examiner response above with regard to claim 1). Therefore, claim 3 is also rejected.

The applicant argues with respect to claims 7 and 10 on page 11, second paragraph, that the nonobviousness of amended independent claim 1 precludes a rejection of claims 7 and 10 which depends therefrom because a dependent claim is obvious only if the independent claim which it depends is obvious. The examiner disagrees. Claim 1 is rejected (see the examiner response above with regard to claim 1), therefore, claims 7 and 10 are also rejected.

The applicant argues with respect to claim 12 and 13 on page 12, second paragraph, that Hulbert in view of Boettger does not and cannot render obvious under 35 U.S.C. 103(a), because the cited references, either individually or in any proper combination, do not teach or suggest all of the claims limitations such as a sum of energy, energy itself being insufficient for correct demodulation, and repeating

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retransmission in the same transmission direction. The examiner disagrees. The examiner refers to the same response with respect to claims 1 and 14 above.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4-6, 8-9, 11 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Hulbert (US 5,713,074).

For claim 1, Hulbert discloses mobile radio power control device using the comparison of retransmitted data, comprising the steps of:

(A) intentionally transmitting traffic information from the base station (figure 2, reference 20) with a first symbol energy amount that is intentionally insufficient for correct demodulation of the traffic information by a mobile station (figure 2, reference 22)(col. 3, lines 7-10, and col. 3, lines 17-20);

(B) after step (A), retransmitting from the base station (figure 2, reference 20) the traffic information initially transmitted with the first symbol energy amount, wherein the traffic information is retransmitted in step (B) with a further symbol energy amount that is also insufficient by itself for correct demodulation of the traffic information by the mobile station (col. 3 lines 17-20); and

(C) repeating step (B) until a sum of the first and further symbol energy amounts

used to transmit the traffic information is great enough to permit correct demodulation by the mobile station (col. 3, lines 7-24, and col. 4, lines 1-10).

For claim 4, Hulbert discloses further comprising the steps of:

(D) determining, at the mobile station (figure 2, reference 22), a received energy value corresponding to the traffic information transmitted from the base station (figure 2, reference 20) in step (A)(col. 3, lines 14-17); and

(E) transmitting the received energy value from the mobile station (figure 2, reference 22) to the base station (figure 2, reference 20)(col. 3, lines 7-10);

(F) wherein the further symbol energy amount used for re-transmitting the traffic information in step (B) is determined at the base station (figure 2, reference 20) in accordance with the received energy value transmitted from the mobile station (figure 2, reference 22)(col. 3, lines 21-24).

For claim 5, Hulbert discloses wherein the received energy value is transmitted from the mobile station to the base station (figure 2, reference 20) using an acknowledgement protocol (col. 3, lines 7-10).

For claim 6, Hulbert discloses wherein acknowledgement protocol is transmitted between the base station (figure 2, reference 20) and the mobile station (figure 2, reference 22) using forward and reverse control channels (col. 3, lines 7-10).

For claim 8, Hulbert disclose wherein the received energy value is transmitted from the mobile station (figure 2, reference 22) to the base station (figure 2, reference 20) using a negative acknowledgement protocol (col. 3, lines 7-10).

For claim 9, Hulbert disclose wherein acknowledgement protocol is transmitted

between the base station (figure 2, reference 20) and the mobile station (figure 2, reference 22) using forward and reverse control channels (col. 3, lines 7-10).

For claim 11, Hulbert discloses further comprising the step of:

(D) summing the traffic information transmitted with the first symbol energy amount in step (A) with the traffic information transmitted with the further symbol energy amount in step B) by combining received energy associated with the traffic information transmitted with the first symbol energy amount in step (A) with received energy associated with the traffic information transmitted with the further symbol energy amount in step (B) in a buffer at the mobile station (figure 2, reference 22)(col. 3, lines 21-24, and col. 4, lines 1-10); and

(E) demodulating the traffic information at the mobile station in accordance with the result of step (D)(col. 3, lines 7-10, and col. 4, lines 1-10).

For claim 14, Hulbert discloses mobile radio power control device using the comparison of retransmitted data, comprising:

(A) means for intentionally transmitting traffic information from the base station (figure 2, reference 20) with a first symbol energy amount that is insufficient for correct demodulation of the traffic information by a mobile station (figure 2, reference 22)(col. 3, lines 7-10, and col. 3, lines 17-20); and

(B) means for re-transmitting the traffic information with a further symbol energy amount that is also insufficient by itself for correct demodulation of the traffic information by the mobile station (figure 2, reference 22)(col. 3, lines 17-20); and

(C) means for repeating step (B) until a sum of the symbol energy amounts used

to transmit the traffic information initially transmitted with insufficient symbol energy for correct demodulation is great enough to permit correct demodulation by the mobile station (figure 2, reference 22)(col. 3, lines 7-24, and col. 4, lines 1-10).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hulbert (US 5,713,074) in view of Jalali et al. (US 6,154,659).

For claim 3, Hulbert does not expressly disclose wherein the further symbol energy amount used for re-transmitting the traffic information in step (B) is determined at the base station using fast forward power control. In an analogous art, Jalali et al. disclose wherein the further symbol energy amount used for re-transmitting the traffic

information in step (B) is determined at the base station using fast forward power control whether to transmit a power up or power down (figure 1, col. 6, lines 12-22).

One skilled in the art would have recognized the wherein the further symbol energy amount used for re-transmitting the traffic information in step (B) is determined at the base station using fast forward power control, and would have applied Jalali et al.'s fast forward link power control system in Hulbert's power control device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Jalali et al.'s fast forward link power control in a code division multiple access system in Hulbert's mobile radio power control device using the comparison of retransmitted data with the motivation being adjusted as rapidly as possible (col. 6, lines 12-14).

8. Claims 7 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Hulbert (US 5,713,074) in view of Seo (US 6,581,176).

For claims 7 and 10, Hulbert does not expressly disclose wherein the traffic information is transmitted in steps (A) and (B) on a supplemental channel, and the forward and reverse control channels have a lower error rate than the supplemental channel. In an analogous art, Seo discloses wherein the traffic information is transmitted in steps (A) and (B) on a supplemental channel, and the forward and reverse control channels have a lower error rate than the supplemental channel (col. 1, lines 53-55).

Seo discloses wherein the traffic information is transmitted in steps (A) and (B) on a supplemental channel, and the forward and reverse control channels have a lower error rate than the supplemental channel (col. 1, lines 53-55 as set forth in claim 10).

One skilled in the art would have recognized the wherein the traffic information is transmitted in steps (A) and (B) on a supplemental channel, and the forward and reverse control channels have a lower error rate than the supplemental channel, and would have applied Seo's SCH in Hulbert's power control device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Seo's method for transmitting control frames and user data frames in mobile radio communication system in Hulbert's mobile radio power control device using the comparison of retransmitted data with the motivation being transmitted the NAK control frames over a supplemental channel (SCH) (col. 1, lines 53-54).

9. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hulbert (US 5,713,074) in view of Boettger et al. (US 6,625,132).

For claim 12, Hulbert discloses mobile radio power control device using the comparison of retransmitted data, comprising:

(A) a power allocation unit at the base station controller (figure 2, reference 20) that selects a first symbol energy amount for transmitting traffic information from the base station transceiver (figure 20, reference 20a) to the mobile station (figure 2, reference 22), wherein the power allocation unit allocates power among a number of different streams of the traffic information (col. 3, lines 20-21-22) such that none of the streams are initially transmitted with enough power for correct demodulation by the mobile station (figure 2, reference 22), and the power allocation unit selects a further symbol energy amount for re-transmitting the traffic information from the base station transceiver (figure 2, reference 20a) to the mobile station (figure 2, reference 22),

wherein the further symbol energy amount is also insufficient by itself for correct demodulation of the traffic information by the mobile station (figure 2, reference 22)(col. 3, lines 17-24);

(B) a base station transmitter (figure 2, reference 20a) that initially transmits the traffic information from the base station transceiver to the mobile station (figure 2, reference 22) at the first symbol energy amount and subsequently transmits the traffic information from the base station transceiver (figure 2, reference 20a) to the mobile station (figure 2, reference 22) at the further symbol energy amount (col. 3, lines 21-24); and

(C) combines retransmitted traffic information from each of the streams of the traffic information until a sum of the symbol energy amounts used to transmit the traffic information initially transmitted with insufficient symbol energy for correct demodulation is great enough to permit correct demodulation by the mobile station (figure 2, reference 22)(col. 3, lines 7-24, and col. 4, lines 1-10).

However, Hulbert does not expressly disclose a buffer in the mobile station. In an analogous art, Boettger et al. disclose a buffer in the mobile station (figure 6B, reference 662, col. 11, line 5).

One skilled in the art would have recognized the buffer in the mobile station, and would have applied Boettger et al.'s buffer 662 in Hulbert's power control device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Boettger et al.'s idle intersystem roaming determination and system reselection in a CDMA wireless communication system in Hulbert's mobile radio power

control device using the comparison of retransmitted data with the motivation being stored data.

For claim 13, Hulbert discloses mobile radio power control device using the comparison of retransmitted data, comprising:

(A) a power allocation unit at the base station (figure 2, reference 20) that selects a first symbol energy amount for transmitting traffic information from the base station to the mobile station (figure 2, reference 22), wherein the first symbol energy amount is insufficient for correct demodulation of the traffic information by the mobile station, and the power allocation unit selects a further symbol energy amount for re-transmitting the traffic information from the base station (figure 2, reference 22) to the mobile station (figure 2, reference 22), wherein the further symbol energy amount is also insufficient by itself for correct demodulation of the traffic information by the mobile station (col. 3, lines 7-24); and

(B) a base station transmitter (figure 2, reference 20a) that initially transmits the traffic information from the base station (figure 2, reference 20) to the mobile station (figure 2, reference 22) at the first symbol energy amount and subsequently transmits the traffic information from the base station (figure 2, reference 20) to the mobile station (figure 2, reference 22) at the further symbol energy amount (col. 3, lines 21-24); and

(C) combines retransmitted traffic information until a sum of the symbol energy amounts used to transmit the traffic information initially transmitted with insufficient symbol energy for correct demodulation is great enough to permit correct demodulation (col. 3, lines 7-24, and col. 4, lines 1-10).

However, Hulbert does not expressly disclose a buffer in the mobile station. In an analogous art, Boettger et al. disclose a buffer in the mobile station (figure 6B, reference 662, col. 11, line 5).

One skilled in the art would have recognized the buffer in the mobile station, and would have applied Boettger et al.'s buffer 662 in Hulbert's power control device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Boettger et al.'s idle intersystem roaming determination and system reselection in a CDMA wireless communication system in Hulbert's mobile radio power control device using the comparison of retransmitted data with the motivation being stored data.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOAN D. NGUYEN whose telephone number is (571)272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. D. N./

Examiner, Art Unit 2616

/Huy D. Vu/

Supervisory Patent Examiner, Art Unit 2616